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# Pension World

The Magazine for Plan Sponsors and Investment Managers/A Publication of Communication Channels, Inc

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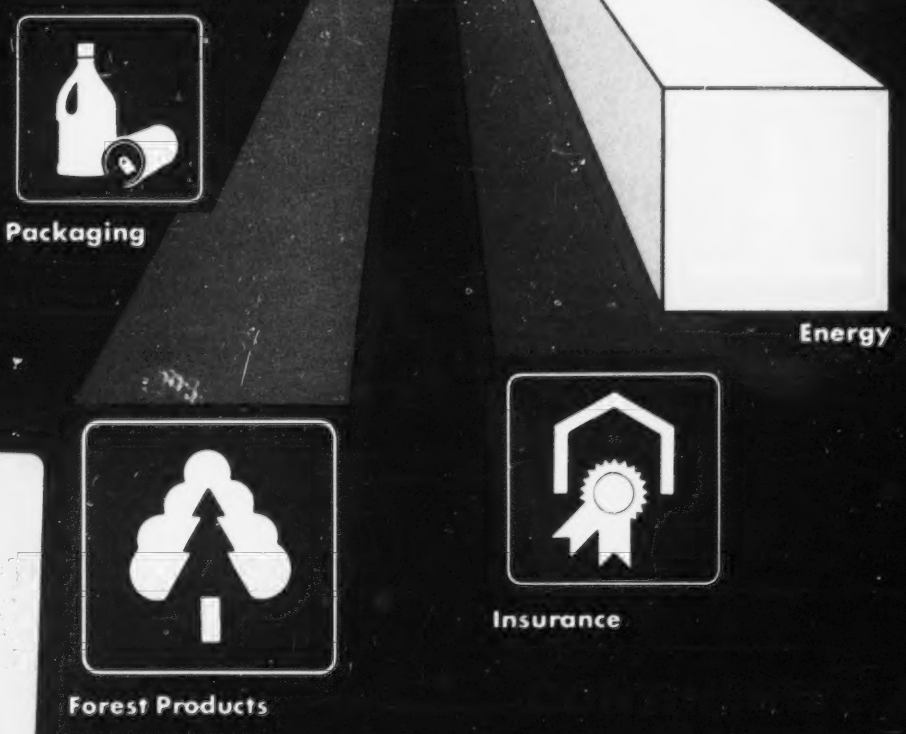


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PN AUG '81

## Home Equity Conversion – A Pension Fund Vehicle?

## Self-Funding – Do You Really Save?

## Investing in Colored Gems

# Pension World

August 1981
Volume 17 Number 8

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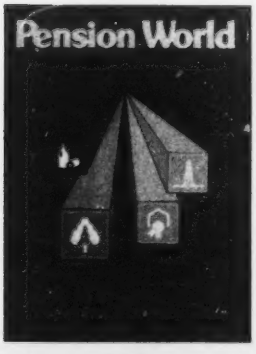


***Cover:*** **Continental Group is comprised of four broad industries — packaging, forest products, insurance, and energy. The company's pension fund is equally diversified, and how that asset mix is managed begins on page 17.**


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# Colored precious gems for pension plans

Traditionally, when Europeans and Asians have been worried about inflation, political turmoil, or war, they have turned to precious gems for the ultimate financial security. Now high inflation combined with low real returns from savings accounts, bank certificates, and bonds have prompted American investors to diversify their portfolios with hard assets such as precious gems.

These are perhaps the hardest asset. Ounce for ounce, precious gems are several thousand times more valuable than gold. Diamonds, rubies, sapphires, and emeralds represent concentrated wealth that is easily stored and protected, and effortlessly transported.

### Diamonds led the way

Diamond prices were the first to increase sharply. In part, this is because diamonds are the best-known precious gems. The historical ratio of diamond prices to ruby prices is approximately two to one. However, with the advent of the reproducible grading standards for diamonds and aggressive advertising and promotion by gem firms, the ratio is now a disproportionate six to one.

Only recently have certificates for colored stones become accepted in the trade. Further, gem investment firms are moving aggressively into the marketing of precious gems. Over the next several years, the price of colored stones should continue upward as the liquidity factor increases.

### Mine production lags

One might expect that the price increases would stimulate greater mine production, but this is not the case. Investment-quality precious gems come to market in a trickle as they have for centuries.

Precious gem mining is unbelievably primitive. It is almost all hand labor. It is not practical to ship large-scale mining equipment far into Asian jungles when a deposit is smaller than a football field. One travels for miles in a jeep along forbidding, narrow, muddy roads to a small clearing that is the mining area.

There is no mechanical way to distinguish precious gems from surrounding rock. By contrast, diamonds stick to grease, so crushed ore is run over greased belts. The diamonds stick to the belts, and everything else is washed away. Diamond mining is highly sophisticated, but rubies, sapphires, and emeralds must depend on primitive laborers. Using a pick and shovel, the workers pry chunks of dirt and rock loose, searching for a crystal that might be a gem, then they wash these rocks just as forty-niners panned for gold.

The operations are easily disrupted by bad weather. If it is too dry, there is no water for washing the dirt away from the gems. Too much rain floods the mining areas and makes the roads impassable.

Precious gem deposits tend to be located in politically volatile regions. Sometimes fear of guerrillas or bandits keeps laborers away from the mines. Every year, people are killed around the mines in Thailand, Cambodia, and Colombia. A socialist regime has virtually shut off the flow of gems from Burma, a legendary source.

Even though each precious gem comes from a number of geographical sources, not all areas yield investment-quality stones. For example, East African as well as Afghanistan, Pakistan, and Indian rubies have too many internal flaws. Australian rubies are too dark. Ceylon rubies are too pinkish. Burmese rubies are very desirable, and many Cambodian rubies are investment-quality, but as mentioned, rubies from these countries are virtually unavailable. The only steady source is Thailand.

Australian and African sapphires are too dark, and they have a higher percentage of gray and green. Kashmir as well as Burmese sapphires make news when they come on the market; they are so rare. Montana sapphires are too small. The primary sources of investment-quality sapphires are Ceylon, Thailand, and whatever refugees manage to smuggle out of Cambodia.

Emeralds come from Afghanistan, Pakistan, India, Brazil, Zimbabwe, Lesotho, Australia, and Russia, but these are minor sources for investment qualities at the present time. Finds have been reported in South-West Africa, Mozambique, Madagascar, and Angola. The only significant sources for investment-quality emeralds are Colombia and Zambia.

### The best buys now

As market conditions change, one precious gem might become a better buy than another. Or certain sizes and qualities become better buys.

Right now, rubies and sapphires are especially attractive investments. Rubies are the rarest of the four precious gems. Yet rubies are a fourth to an eighth the price of comparable quality diamonds. Sapphires are an eighth to a sixteenth the price of comparable quality diamonds.

Sapphires, like rubies, are com-

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**Table 1**

**Thai Ruby Price History***
**(Investment Grade, 1-Carat)**

| Color Rating | May 1979 | December 1979 | March 1980 | June 1980 | September 1980 | December 1980 | March 1981 |
|---|---|---|---|---|---|---|---|
| 3.5 | $2,250 | $5,250 | $11,875 | $10,625 | $11,250 | $13,750 | — |
| 4.0 | 1,625 | 3,125 | 6,750 | 6,250 | 7,000 | 8,600 | $8,200 |
| 4.5 | 1,200 | 2,200 | 4,125 | 3,750 | 4,125 | 5,600 | 5,250 |
| 5.0 | 1,100 | 1,725 | 2,750 | 2,625 | 2,750 | 3,750 | 3,375 |
| 5.5 | 875 | 1,375 | 2,395 | 2,125 | 2,200 | 3,000 | 2,750 |
| 6.0 | 750 | 1,075 | 2,000 | 1,750 | 1,875 | 2,375 | 2,250 |

*The above prices would be 10-20 percent lower for institutional purchases. This chart reflects the approximate selling price that investment dealers might charge their customers. It includes a markup over the inter-trade prices of Precious Gem Resources, Inc., for Thai rubies with the AGL parameters listed below:

| | | | |
|---|---|---|---|
| Tone: | 75-85 | Proportions: | Good (6) |
| Brilliancy: | 40-50% (average) | Finish: | Good (6) |
| Clarity: | [illegible] | | |

posed of a mineral called corundum. When chromium oxide is present, corundum is red, and we refer to it as ruby; when it comes in another color such as blue, pink, purple, orange, gold, yellow or green, we refer to it as a sapphire. Blue, of course, is the most highly valued color, followed by orange (padparadja) and pink; other colors are worth a fraction as much. Because blue sapphires are not as popular as rubies, they are less expensive — about a fifteenth the price of comparable quality diamonds. Investment-quality blue sapphires should perform nearly as well as rubies.

Most emeralds come from relatively stable countries, Colombia and Zambia. With peace in Zimbabwe, emerald production in Africa will probably be stepped up. Iran, an important emerald market, has stopped buying since the Khomeini revolution, causing price reductions in commercial-quality and certain investment-quality material. Only very clean, top quality emeralds have performed well.

The rarity factor of rubies, sapphires, and emeralds argues for a realignment to the historical two to one ratio. Colored precious gems are 30 to 50 times more rare than diamonds and are, therefore, significantly undervalued.

Rarity is a major factor in establishing the prices of other collectibles — art, coins, stamps, and antiques.

### Parameters for gems

Precious gems are not created equal. They differ in four categories: color, clarity, cut, and carat weight. Each can substantially affect the value of a gem.

*Color.* The most important factor in determining the quality and value of precious gems is color. Two investment stones of equal weight, cut, and clarity might vary more than 1,000 percent in price as a result of a difference in color. In diamonds, one looks for absence of color, but in rubies, sapphires, and emeralds, one looks *for* color.

The two dimensions of color are purity and the amount of color or tone. Purity indicates the competition between the primary color (i.e., red in a ruby, blue in a sapphire, green in an emerald) and the secondary colors. Tone refers to the intensity of the color present.

Mother nature does not provide us with 100 percent pure color in gems. The higher the percentage of primary color present in the stone, the lower its grade, on a scale of 1 (excellent) to 10 (poor). The purest gems on the market today with any regularity have about 70 percent primary color, graded 3.5 to 4. Gems graded 1 to 3 are virtually nonexistent.

*Clarity.* This refers to internal inclusions and surface characteristics. They are not as important as in diamonds. Clarity varies dramatically with the species and variety of a gem. Minor internal inclusions and surface characteristics may be present even in the finest precious gems.

*Carat weight.* Gems are weighed in carats — 142 per ounce. In the United States, investment gems should be larger than a carat; European investors usually consider two carats a minimum. The value per carat increases with the size of a gem, e.g., a two-carat ruby is about twice as much per carat as a one-carat ruby. This fluctuates according to market conditions.

*Cut.* The Far Eastern cutters, who handle most rubies and sapphires, traditionally try to retain as much weight as possible by cutting close to the shape of the rough or

## Tips for prudent investing in gems

1. Learn as much as possible about precious gems.

2. Buy only from a colored precious gem expert. Remember, a diamond expert may know very little about rubies, sapphires, and emeralds.

3. Deal only with reputable suppliers. Select companies with strong resources and financial backing who will assist you when you want to remarket the gems.

4. Buy from someone who will keep you abreast of world market conditions and how they affect your gem holdings.

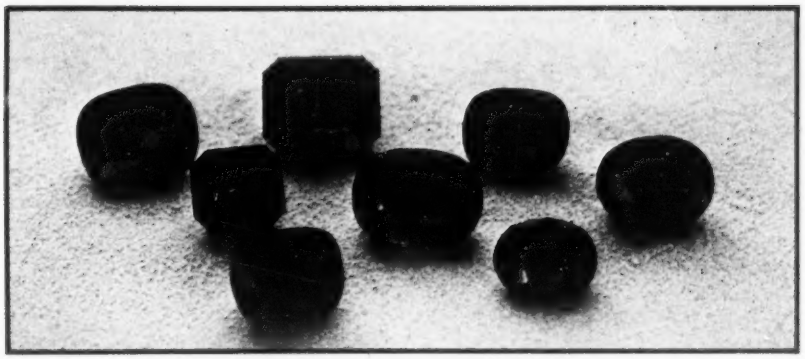
5. Inquire about the supplier's remarketing services.

6. Buy as close to wholesale as possible. Prices can vary a great deal.

7. Buy investment-quality gems only.

8. Insist on a certificate when you buy a gem.

9. Be prepared to hold your gems for at least three years. The longer they are held, the more they should appreciate.



uncut gem. Symmetry and good proportions are secondary to weight retention; they are less important than in diamonds.

The shape of rough rubies and sapphires usually favors a cushion antique or oval cut — these are considered standard. Most emeralds lend themselves to a rectangular cut (emerald cut) — the standard for emeralds. Nonstandard cuts are worth 5 percent to 15 percent less, except for round brilliant cuts, which command a 5 percent to 10 percent premium over standard cuts.

Specialized training and scientific equipment are required to identify as well as to grade colored precious gems. Color analysis is the most difficult function.

Surprisingly, most jewelers, gemologists, and even gem dealers are not qualified to grade colored precious gems because they lack the necessary training and experience.

Several independent gemological laboratories certify gems. A certificate from the Gemological Institute of America (GIA), European Gemological Laboratory (EGL), and International Gemological Institute (IGI) provides weight, measurement, and test results indicating whether a stone is natural or synthetic. These certificates do not include any indication of quality as reflected in price.

Today, many dealers believe the most informative and specific colored precious gem certificate is offered by American Gemological Laboratories in New York City. A more general certificate is offered by United States Gemological Services (USGS) in Santa Ana, California.

Investors use precious gems to hedge their portfolios against inflation, monetary crisis, and political turmoil.

As can be seen from Table 1, all investment-quality rubies appreciated better than 150 percent between May, 1979, and September, 1980. The better the grade, the higher the percentage of appreciation. Sapphires and some emeralds also did well.

Colored precious gems are going into IRA's, Keogh's, and qualified corporate plans. (See Table 2.)

There is little likelihood that colored precious gems will become the darlings of the bigger pension funds in the near future. First of all, the fiduciaries running these funds perceive investments of this sort to be "too new," untried," and, perhaps, not prudent, despite legal rulings and ERISA policy to the contrary.

The simple reality is that there are just not enough of these gems available to make a worthwhile investment commitment for the GM's, AT&T's, and IBM's. If one of the top 100 funds put just a small percentage of its assets into gems, existing inventories would be depleted immediately.

Small to intermediate size funds, on the other hand, can quite handily invest $50,000, $500,000, and even $1 million dollars in gems without creating a market dislocation. This could account for up to 10 percent of the fund's assets. In the IRA and Keogh accounts, it is not uncommon to see 50 to 100 percent invested in precious gems, depending on the investment attitude, objectives, and age of the owner. Generally, the dollar amount invested will be considerably less, however, than in a qualified corporate plan.

Can and should the corporate plan diversify into gems? Enough has been written since ERISA that no one any longer questions the legality of this type of investment. The *should* part of the question then deals with prudence. You ask, "Is it prudent to include precious gems in my plan? Can they provide the diversification and inflation hedge needed to satisfy the prudent man rule on one hand and provide our participants with an investment vehicle to stay ahead of inflation on the other?"

Although the answer is *yes*, we do not advocate a "single-stone" approach. The key is a carefully structured, diversified portfolio of

*(Continued on page 58)*

**Table 2 Sample Precious Gem Portfolios for Pension Funds**

***Portfolio #1* — $250,000, 5-year investment period**

| | |
|---|---|
| 50% Rubies | 1-3 carat sizes |
| 35% Sapphires | 1-5 carat sizes |
| 15% Emeralds | 1-3 carat sizes |

***Portfolio #2* — $250,000, 10-year investment period**

| | |
|---|---|
| 50% Rubies | 1-3 carat sizes |
| 30% Sapphires | 1-5 carat sizes |
| 20% Emeralds | 1-3 carat sizes |

***Portfolio #3* — $500,000, 10-year investment period**

| | |
|---|---|
| 45% Rubies | 1-4 carat sizes |
| 30% Sapphires | 1-10 carat sizes |
| 25% Emeralds | 1-4 carat sizes |

***Color* — in all three portfolios should be:**

| | |
|---|---|
| Rubies | 3.5*-6.3 |
| Sapphires | 3.5*-5.5 |
| Emeralds | 3.5*-5.5 |

*3.5 is extremely rare. When available, it should be included in the portfolios.

It is imperative to have a well-balanced portfolio of grades/tones and sizes that reflects the availability of the individual varieties of gems in the world market.

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## International Pension World

*(Continued from page 10)*

time where the state and employer take care of the individual. Martin indicated that from the Stone Age through today, the earth has contained some 40 to 50 billion people, about one-tenth of whom are alive today. Another 10 billion people will be added to our earth over the next 10 years, which will create enormous problems.

Martin indicated that we are making promises to ourselves that must be kept by our children. He said that the *promises* were made in the '60's, the *expectations* were of the '70's and the *fulfillment* will be in the '80's and thereon. He closed his remarks by suggesting that perhaps defined contribution or money purchase schemes may hold the answer for the future of occupational pension schemes.

There seemed to be a strong belief by the experts at the IBIS conference that perhaps benefit planners may have made promises based on the economic growth of the '50's and '60's, which raised the expectations of employees. Due to inflation and the slowdown of the economic growth in the Western World, we may have to cut back on our targets in order to meet the fulfillment. □

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## Colored precious gems for pension plans

*(Continued from page 24)*

precious gems. More dramatic than managing securities portfolios, selection, balance, and management of precious gems can show astounding variations.

Consider the importance of price ratios between diamonds, rubies, sapphires, and emeralds. If the historical ratios among the precious gems are unbalanced and/or the rarity or supply of one of the gems is changed, it would make sense to emphasize the undervalued gem in the portfolio. And what balance of color grades will spread the risk, yet offer the best appreciation potential? And, of course, what mix of carat sizes among the stones will minimize risk, enhance liquidity, and provide the highest appreciation?

These are many of the factors that go into designing a customized portfolio for a pension plan. This, however, is just the beginning. The performance must be monitored and valued at least once a year. In time, changes may have to be made, profits taken, a move made perhaps from rubies to sapphires.

Qualified advisors in the colored precious gem investment business are as scarce as quality gems. The advisor should be properly selected and the portfolio well-balanced. □

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## Multiemployer Pension Plan Amendments Act

*(Continued from page 35)*

*Guaranteed benefits.* Guaranteed benefits payable by the PBGC will be 100 percent of the first $5.00 of monthly benefit payment times years of service credit plus 75 percent of the next $15.00 of monthly benefit payment times years of service credit (Secs. 4022A, 4001).

*New funding requirements.* Future benefit increases must be funded over 30 years instead of 40 years. Future experience gains and losses may only be spread over 15 years instead of 20 years.

*Withdrawal liability insurance.* The Pension Benefit Guaranty Corporation has been directed to establish insurance for multiemployer plans against noncollectible withdrawal liability.

*Abatement.* An employer's withdrawal liability is abated if it resumes contributions to the plan and in some cases is forgiven. Regulations will issue.

*Mergers.* Mergers may take place under the following conditions:

1. The merger does not reduce any accrued benefits;
2. The merged plan is not expected to become insolvent;
3. Each plan entering the merger had an actuarial valuation for the preceding plan year based on recent data; and
4. The PBGC is notified at least 120 days in advance.

*Disclosure.* The Act gives the employer a right to a statement from the plan as to what its liability would be upon withdrawal. The plan, however, may charge a reasonable fee in connection therewith.

*Delinquent contributions.* It is now a violation of ERISA for an employer to fail to make multiemployer plan contributions required by contract, and action may be commenced in the Federal Court relative thereto. The Court must award interest, attorney's fees and costs, and liquidated damages in an amount as provided in the plan up to 20 percent of unpaid contributions [Secs. 4301(b) and 502(g)(2)].

*Mistaken contributions.* The Act has done away with the distinction between mistakes of fact and mistakes of law. Now mistaken contributions to a multiemployer plan may be returned six months after the plan administrator discovers the mistake [Sec. 403(c)(2)(A)].

*Effective date.* Most of the provisions of the Act are effective as of September 26, 1980, the date of enactment. Those relating to withdrawal liability and reorganization have other effective dates as noted above. □

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## Accounting principles for defined benefit plans

*(Continued from page 42)*

tants. Some of the more important findings of the FEI study include:

—Recognition of liability. Two out of every three respondents to the survey rejected the idea that some measure of an employer's pension obligation should be recorded as an accounting liability.

—Actuarial cost method. More than 73 percent of the respondents were against the mandating of a single actuarial cost method to determine expense. Many of those interviewed observed that this choice should be based on the financial characteristics of the sponsor and its plan. They emphasized that each plan and sponsor is unique.

—Disclosure. Respondents clearly identified pension expense as the most essential element in assessing an employer's pension costs. Disclosure of the actuarial present value of vested benefits and of the fair market value of the plan's assets was supported by more than two-thirds of the respondents.

### Conclusion

Employer accounting for pension costs and other post-employment benefits is a very complex subject. Because of the complexity of the issues and the comprehensive manner in which they must be dealt with, the overall FASB project probably will take a number of years to complete. □